

IN THE CLAIMS:

Please amend the claims as set forth below:

1. (Currently amended) In a computer network, a method of implementing a virtual layer around a software application instance in communication with an operating system, the method comprising:

registering an application by associating a unique application identifier with the application, and passing said application identifier to a software module that processes transitions between the application and the operating system;

allocating a resource in response to a resource request by the application;

allocating a resource identifier associated with said resource in response to said request;

allocating a virtual resource identifier associated with said resource in response to said request;

translating a combination of said application identifier and said resource identifier to said virtual resource identifier when the resource identifier is passed from the operating system to the application; and

translating a combination of said application identifier and said virtual resource identifier to said resource identifier when the virtual resource ~~driver~~ identifier is passed from the application to the operating system.

2. (Cancelled)

3. (Previously Presented) The method of claim 1 further comprising creating an entry in a virtual resource translation table in response to said resource request, wherein said entry describes the association between said application identifier, said resource identifier, and said virtual resource identifier.

4. (Previously Presented) The method of claim 1 further comprising associating a plurality of resource identifiers and a plurality of resources with said virtual resource identifier.

5. (Previously Presented) The method of claim 4 wherein said plurality of resources are a plurality of ports.

6. (Previously Presented) The method of claim 1 further comprising associating said virtual resource identifier with a new resource identifier and a new resource in response to said application being restored from one or more snapshots.

7. (Currently Amended) A system comprising hardware adapted to execute program instructions from a computer readable medium, the program instructions including an operating system, a first software module, and a second software module, wherein:

the operating system is operable to:

allocate a resource in response to a resource request by an application; and
allocate a resource identifier associated with said resource in response to
said request;

the first software module is operable to:

register the application by associating a unique application identifier with
the application; and
pass said application identifier to ~~a software~~ the second software module
that processes transitions between the application and the operating
system; and

the second software module is operable to:

allocate a virtual resource identifier associated with said resource in
response to said request; ~~and the system further comprising:~~

~~a translation table operable to:~~

translate a combination of said application identifier and said resource
identifier to said virtual resource identifier when the resource
identifier is passed from the operating system to the application;
and

translate a combination of said application identifier and said virtual
resource identifier to said resource identifier when the virtual

resource ~~driver~~ identifier is passed from the application to the operating system.

8. (Currently Amended) The system of claim 7 wherein said second software module is configured to update a translation table ~~comprises with~~ an entry describing the association between said application identifier, said resource identifier, and said virtual resource identifier.

9. (Currently Amended) The system of claim 7 wherein said second software module is operable to associate a plurality of resource identifiers and a plurality of resources with said virtual resource identifier.

10. (Previously Presented) The system of claim 9 wherein said plurality of resources are a plurality of ports.

11. (Currently Amended) The system of claim 7 wherein said second software module is operable to associate said virtual resource identifier with a new resource identifier and a new resource in response to said application being restored from one or more snapshots.

12. (Currently Amended) A computer readable medium including program instructions executable to implement a method comprising:

registering an application by associating a unique application identifier with the application, ~~and passing said application identifier to a software module that processes transitions between the application and the operating system;~~

~~allocating a resource in response to a resource request by the application;~~

~~allocating~~ receiving a resource identifier associated with said a resource allocated by an operating system in response to said a resource request by an application;

allocating a virtual resource identifier associated with said resource in response to said request;

translating a combination of said application identifier and said resource identifier to said virtual resource identifier when the resource identifier is passed from the operating system to the application; and
translating a combination of said application identifier and said virtual resource identifier to said resource identifier when the virtual resource ~~driver~~ identifier is passed from the application to the operating system.

13. (Previously Presented) The computer readable medium of claim 12 wherein the method further comprises creating an entry in a virtual resource translation table in response to said resource request, wherein said entry describes the association between said application identifier, said resource identifier, and said virtual resource identifier.

14. (Previously Presented) The computer readable medium of claim 12 wherein the method further comprises associating a plurality of resource identifiers and a plurality of resources with said virtual resource identifier.

15. (Previously Presented) The computer readable medium of claim 14 wherein said plurality of resources are a plurality of ports.

16. (Previously Presented) The computer readable medium of claim 12 wherein the method further comprises associating said virtual resource identifier with a new resource identifier and a new resource in response to said application being restored from one or more snapshots.